Avian Influenza H5N1 Testing Guidelines for Physicians

Michigan Department of Community Health

http://www.michigan.gov/flu
Updated June 21, 2006

1. CLINICAL CRITERIA NECESSARY FOR REQUESTING TESTING [1]

An illness with all of the following:

- Temperature of ≥38°C (≥100.4° F), **AND**
- Has radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, **AND**
- Requires hospitalization or is fatal; or non-hospitalized with epidemiological link

AND

2. EPIDEMIOLOGICAL CRITERIA NECESSARY FOR TESTING

The clinician should ask the patient about the following **within 10 days** of symptom onset:

- History of travel to a country[2] with influenza H5N1 documented in poultry, wild birds, and / or humans, **AND** had at least one of the following potential exposures during travel:
  - Direct contact with (e.g., touching) sick or dead domestic poultry
  - Direct contact with surfaces contaminated with poultry feces
  - Consumption of raw or incompletely cooked poultry or poultry products
  - Direct contact with sick or dead wild birds suspected or confirmed to have influenza H5N1
  - Close contact (approach within 1 meter [approx. 3 feet]) of a person who was hospitalized or died due to a severe unexplained respiratory illness
- Close contact (within 1 meter [approx. 3 feet]) of an ill patient who was confirmed or suspected to have H5N1.
- Worked with live influenza H5N1 virus in a laboratory.

If YES to the criteria in both Boxes 1 and 2 above

1. Initiate Standard and Droplet infection control precautions; initiate Airborne infection control as indicated.[3]
2. Treat as clinically indicated.[4]
3. Contact your local health department and the MDCH Bureau of Epidemiology (BOE) to request approval for Avian Influenza A (H5N1) testing and specimen collection protocols.
   - BOE can be contacted M-F 8am - 5pm at (517) 335-8165 or after hours and weekends at (517) 335-9030.
   - If approved, collect and send specimens for novel influenza virus testing to MDCH Laboratory.
     - Oropharyngeal swab specimens and lower respiratory tract specimens (e.g., bronchoalveolar lavage or tracheal aspirates) are preferred.[5]
     - Serologic testing for influenza H5N1-specific antibody is not available at the MDCH Laboratory.[6]
4. Help identify contacts, including healthcare workers.

1. Testing can be considered if the patient has a mild or atypical disease, such as respiratory illness and fever that does not require hospitalization or significant neurologic or gastrointestinal symptoms in the absence of respiratory disease, or if the patient has a severe or fatal respiratory disease whose epidemiological information is uncertain, unavailable or otherwise suspicious but does not meet the criteria in Box 2. Please contact your local health department and the MDCH Bureau of Epidemiology at the numbers listed above for further consultation.

2. For a listing of influenza H5N1-affected countries, visit the CDC website at http://www.cdc.gov/flu/avian/outbreaks/current.htm; the OIE website at http://ww.oie.int/eng/en_index.htm; and the WHO website at http://www.who.int/csr/disease/avian_influenza/en/.

3. CDC is currently revising its interim guidance for infection control, which currently differs between seasonal, novel (avian) and pandemic influenza. Until further updates are available, refer to http://www.cdc.gov/flu/professionals/infectioncontrol/ for seasonal influenza infection control, and http://www.cdc.gov/flu/avian/professional/infect-control.htm for novel influenza infection control. For pandemic influenza, please reference the Health and Human Services Pandemic Influenza Plan pg. 256-258(Supplement 5, pg. 20-22) at http://www.hhs.gov/pandemicflu/plan/pdf/HHSPandemicInfluenzaPlan.pdf.

4. For the most current recommendations, visit the CDC's antivirals website at http://www.cdc.gov/flu/professionals/treatment/.

5. Oropharyngeal swab specimens and lower respiratory tract specimens (e.g., bronchoalveolar lavage or tracheal aspirates) are preferred because they appear to contain the highest quantity of virus for influenza H5N1 detection. Nasal or nasopharyngeal swab specimens are acceptable, but may contain less virus and therefore not be optimal specimens for virus detection. Bronchoalveolar lavage is considered to be a high-risk aerosol-generating procedure. Therefore, infection control precautions should include the use of gloves, gown, goggles or face shield, and a fit-tested respirator with an N-95 or higher rated filter. A loose-fitting powered air-purifying respirator (PAPR) may be used if fit-testing is not possible. Detection of influenza H5N1 is more likely from specimens collected within the first 3 days of illness onset. If possible, serial specimens should be obtained over several days from the same patient. Swabs used for specimen collection should have a Dacron tip and an aluminum or plastic shaft. Swabs with calcium alginate or cotton tips and wooden shafts are not recommended. Specimens should be placed at 4°C immediately after collection.

6. Serologic testing for influenza H5N1-specific antibody, using appropriately timed specimens, can be considered if other influenza H5N1 diagnostic testing methods are unsuccessful. Paired serum specimens from the same patient are required: one sample should be tested within the first week of illness, and a second sample should be tested 2-4 weeks later.